

THE  
**MIDSTATE**  
A NEWS

**MIDSTATE**  
**A.R.C.**

PUBLICATION

March/April, 1986

PRES-Jack Parker, N9EXK..... 881-0817  
V.P.-Joan Kemp, N9DON..... 736-9355  
SEC/TREAS-Tom Carroll N9AZD .. 535-8047  
TRUSTEE-Darrell Sego, KM9S .... 736-4049  
ACTIVITIES-Paul Thomas, KA9DTH 881-6338  
C.E.A.-Dave Wendt, KA9OOH..... 784-1044

**NEXT MEETING**

March 15, 1986  
HOUSE OF FRANKLIN  
FRANKLIN, INDIANA  
Breakfast: 0730  
Meeting: 0800

\*\*\*\*\*

The Midstate News is published by the Midstate Amateur Radio Club, a non-profit organization which provides amateur communications for central Indiana communities, and activities for the active hams. Any and all submissions are welcome, and must be postmarked by the 26th day of the month prior to release. Membership queries should be directed to Tom Carroll, N9AZD at 535-8047. Midstate ARC owns and maintains the N9AZD/R repeater on 146.835 MHz.

Editor: Bradley Stone, NB9M  
Phone: 882-5245

Assistant Editor: Jay Chrisman, KA9MUU  
Phone: 882-7773

\*\*\*\*\*

**MEMBERSHIP DRIVE**

**APRIL FOOL**  
**AUTOPATCH**

University Heights Hospital maintenance manager Sam Hohl has given approval for the installation of the N9AZD/R autopatch equipment. The hospital has agreed to have a dedicated telephone line and electrical service ready for us by April 1st.

Tom, N9AZD and Larry, WB9YAJ are wrapping up the equipment construction-including a multiple input digital mixer. Mark, N9EKG has the antennas ready to install. We will plan to install the antennas at the hospital the 2nd week of March.

We need a drill bit: 3/8 inch diameter with a 17 to 19 inch shank. Please contact N9EKG if you have one. We also need a good buy on 150-200 feet of 8X mini 50 ohm coax to run from the water tower to the shack. As always, a few potential "bugs"; whether to climb the tower. The ARRL changed our liability carrier and Tom, N9AZD is trying to get the new carrier to send a statement of coverage to the hospital (required before we begin work.)

The repeater has been functioning very well other than a minor relay problem that has been corrected. We are keeping the building warm with a small heater and everyone looks at but does not touch the cavities lest they go astray.

May I again say thank you to all who have worked long hours to develop and keep the repeater on the air. I will try to pre-announce the dates we plan to work on the autopatch project so those of you with an interest can be involved. No, you don't have to be an RF expert; I touch nothing other than electrical supply equipment. There's a place for everyone.

-TNX, Paul KA9DTH

**TNX EVERYONE...**

The Midstate News wishes to thank all of those individuals who dug down the past couple of months to make everything work.



3/86

(5)

The selfless donations to both the repeater and newsletter funds were so numerous that I hesitate to list them for fear that I might miss someone. However, I feel that the \$100.00 donation by Joan, N9DON and Larry, N9DLN deserves special mention. Kicking things off, Joan and Larry started a chain of events that is leading to the procurement of cavities for our repeater. Also, as always a big THANKS to Mike Head, WB9ZQE and Bruce Woodward, W9UMH for making available to us the BEACON and the INDIANA SECTION ARRL LETTER. These fine publications, coupled with the RCA RBBS and others provide a solid base of material for the Midstate News.

## FROM THE PRESIDENTS DESK

### YOU TALK TOO MUCH...

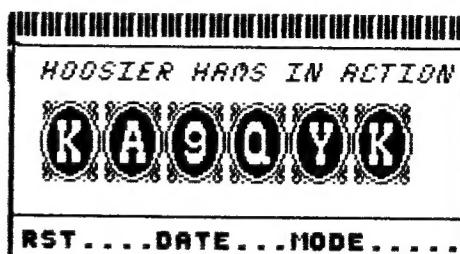
How many times has your spouse told you that? Especially when it comes to your ham radio? Ironically, you may not be using the available ham bands enough. Almost every day we are hearing about another request to have the FCC restrict our frequency allocations. At the same time national surveys indicate we may be getting too old to even key the radio. The average age of a ham is reportedly 49 years old. That's great if you just turned 48. You're almost average.

But, I think hams are above average. Not in age, but in commitment to the hobby. And if this hobby is to continue growing we have to have youth. We need young people who are eager to learn from your "average" ham. If we don't recruit younger people there soon may not be a hobby to share.

When was the last time you asked a youngster about Morse Code? When did you last ask a friend about becoming a ham? If you can't remember, then our hobby is in trouble. Without new hams to share the frequencies, ham radio may become just a silent memory. Do yourself a favor and recruit a ham today. -73, Jack N9EXK

**FOOTNOTE:** Jack's only too right. This isn't a new problem; I was interested in amateur radio in the early seventies while in high school. There wasn't a ham in sight. I didn't know where to begin. Clubs such as ours, and concerned hams like Dave Wendt and Dave Distler advertise. Locally, we're improving—and now perhaps that sophomore won't have to wait until he is 26 to get his ticket.

-editor



Now you can have your own custom, computer designed QSL card for only \$5.00 (plus the printers fee.) Just call the editor at 882-5245.

## HAM OF THE DAY

Paul Thomas, KA9DTH

Known locally as a "turbo-ham" type of amateur, Paul was one of, if not THE major force behind the formulation of this organization. His leadership qualities and friendly, co-operative manner is well known to Midstate members. (And, this guy is ALWAYS prompt with his newsletter columns.)

Paul became an amateur in 1979. He and his lovely wife Helen have lived in the area for 25 years, and hail from the a Chicago, Illinois suburb. They have three harmonics: Peggy (25), Barbara (24) and Phillip (almost 21.)

Paul's favorite ham-type pastime is ten meters. Needless to say, his TS830S and tri-

bander will have to wait patiently for the sunspots to pick up. He works for IPS as "Systems Operations Co-ordinator," serving his employer for nearly 26 years. A quiet life in Minnesota is in his sights.

## THE COSMIC ORDER OF RF

Meet Harry Vicker, a quiet, unassuming boy who traded his boldness for a 20 meter pileup. Harry Vicker: owner of a voice- and a call- that propagated 14 MHZ into the Cosmic Order of RF.

"Harry! Turn that radio off and come down for dinner!"

"Just a minute, Dad!" returned Harry half heartedly. "I'm trying to work a new one!" Harry adjusted his XIT up a few Kilohertz and put in his call again, just when the wail from the speaker began to subside. "Come on..." he muttered. Harry heard his father angrily coming up the stairs, two steps at a time.

"Who's that lid 5 KC up splattering this frequency? QSY, jerk! OK, QRZ from..." came the sought after station through the speaker.

"All right Harry, turn it off and come downstairs NOW!"

"But Dad, I need him for W.A.P.!"

"NOW, before I turn you over on my knee and..."

...BUZZ..SQUEAL.."Hey, the QRMer is gone; try again Paul, phonetically." Harry shrugged and turned the rig off. Reluctantly, he turned and followed his father down the stairs, dragging his long tail.

A short excursion to a pin of light, a boy named Harry, and a case of oversight. Trip the BFO and tune carefully, for we've just paid 20 meters a visit, in THE COSMIC ORDER OF R.F.

-Snidely F. Milligan

## A MYSTERY....

The KN9E REPEATER would like to thank an anonymous individual who has graciously donated \$250.00 to the KN9E repeater fund. This money is greatly appreciated and will be put to good use in expanding and improving the existing system. Look for new features to be added, including our next venture- a 2 meter to 10 meter FM link.

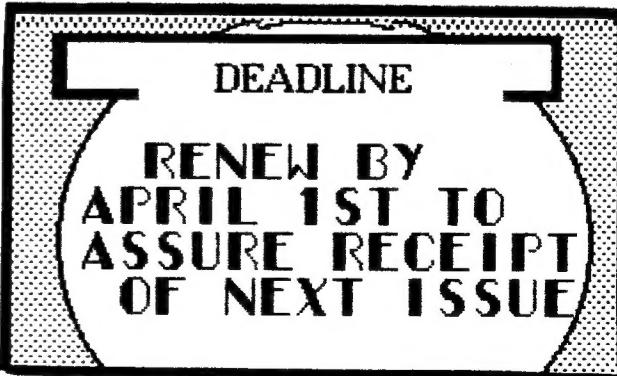
Thanks!!  
Dave and Darrell

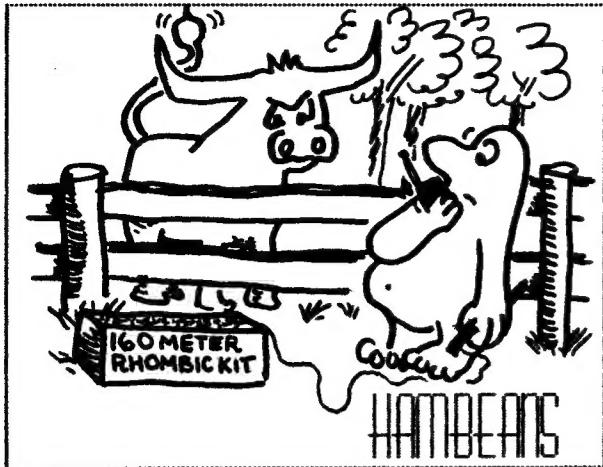
## JANUARY MEETING

A total of 22 members showed up for the January 18, 1986 breakfast meeting at the House of Franklin. Preliminary details of the February 22 Midstate swapfest were addressed as well as repeater needs. The winner of the Kerchunker fund would be announced during the February 15 meeting.

## FEBRUARY MEETING

14 attended the February 15 meeting at the University Heights Hospital. Bob Flood, W9BBE was announced the winner of the January Kerchunker fund, and in turn donated the \$8.00 to the repeater fund! Jack, N9EXK stressed the importance of the need to raise money for the repeater cavities. Final details on the swapfest and novice classes were addressed. Large amounts of coffee were consumed by this bunch; it was VERY cold outside. Thanks to University Heights Hospital and WA9VQO for their hospitality.





...AND UNLESS YOU CAN RUN  
THAT FIELD IN 99 SECONDS,  
DON'T CROSS THAT FENCE!  
THE BULL CAN DO IT IN 10...

## BITY: ON THE OUTSIDE

Many amateurs are also SWL's, and own a stable general coverage receiver, or have a transceiver with a general coverage feature. Both are suitable for use monitoring utility, or "UTE" transmissions outside our bands. These utilities include press services, government, embassy, coastal and maritime stations. A whole new listening environment is within the reach of amateurs who are able to receive RTTY, AMTOR and CW with their hardware/computer combinations or a dedicated terminal.

Imagine receiving the news (maybe getting a print-out) hours before your local newspaper appears on your doorstep. If you follow the stock market, this ability can pay off. Mysterious CIA and foreign spy "number" stations intrigue a devoted group of would-be cryptographers. Ship-to-shore transmissions are often amusing, and nearly always entertaining. Coastal stations and AFRN (Armed Forces Radio Network) provide a wealth of timely news, sports and reviews to their intended audiences.

Many RTTY signals can be decoded with

standard amateur equipment. Most stations utilize standard shifts (170, 425 and 850 Hz.) A sizeable number use baud rates the hams are familiar with, such as 72.4 baud. However, a variable shift feature and selectable baud feature are very useful. If you already own a Commodore 64, two products are available for the utility listener. The Kantronics RadioTap (demodulator and software) and AEA SWL Text are both adaptable to your particular station needs. Many low-priced "terminal units," such as the MFJ 1224 and the Kantronics "The Interface" provide disappointing performance in these bands. In general, any demodulator with traditional passive/active filtering and without an XR2211 PLL IC will work fine. If your demodulator does not have a variable or switchable shift feature, many times one can "single-tone detect," using the CW position of the unit, and the RTTY mode of the software.

Standard AMTOR equipment will work beautifully for copying TOR (Teletype Over Radio) coastal stations when used in listening (L) mode. Both are generally 100 baud, 170 Hz shift.

There are a number of interesting products and books available from Universal Shortwave Radio. Their large catalog is \$1.00. Write them at 1280 Aida Drive, Reynoldsburg, Ohio 43068.

## C.E.A. REPORT

I bought a copy of Indianapolis Monthly magazine to read over lunch the other day, and my eye was caught by a cover headline: "An Indiana Earthquake! How Safe Will You Be?" That got me thinking. When we think of earthquakes, we think of Los Angeles, San Francisco, Mexico City---and feel lucky to be living in the nice, stable Midwest. Well, don't get cocky about it, because the strongest earthquake recorded in human history happened only about 300 miles from here in Missouri, 1811-1812. There is a virtual direct line deep under the ground between there and

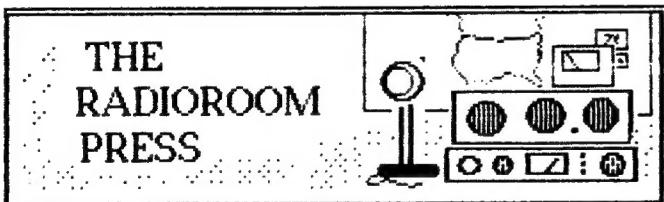
here. In fact, according to one authority there is a one in four chance of an earthquake of over 8 on the Richter scale in that area before the year 2000. Such a quake would certainly affect our area, and could be devastating.

We all know what a valuable part ham radio played in the recent Mexico City earthquake and in the Columbia eruption; some of us were involved pretty directly. Before we sit back in our easy chairs and sigh, "better them than us," though, we had better take a look at our own geologic history, right there in our back yard, so to speak, and ask ourselves whether we would be ready for one here.

I have a copy of the February issue of Indianapolis Monthly if anyone wants to read the article; I highly recommend it.

-Dave, KA9OOH  
Johnson County ARES EC

Congratulations to Dave, who officially became our EC last January according to the 1986 Indiana ARRL Section Letter #29. Let's give him our support when he needs us.  
-editor



Congratulations to the Purdue ARC; they're celebrating their 75th anniversary. The group was started in 1910 by curious wireless experimenters from the Electrical Engineering Department. The Purdue ARC and the Indianapolis Radio Club (founded 1914) are among the oldest radio clubs in the world. The oldest, The Junior Wireless Club, was established on January 2, 1909 according to

the ARRL publication 200 Meters and down. This club now exists under a different name.

Senator Richard Lugar commended Indiana Amateurs in the October 2, 1985 Congressional Record for their efforts in the earthquake disaster in Mexico last year.

As of November, 1985 amateur radio had lost 386 hobbyists in total. 910 individuals obtained their first ticket, and 1,296 failed to renew. Indiana ranks 12 in the number of licensed stations by state. There are 2,315 Novices, 2,347 Technicians, 2,708 Generals, 2,145 Advanced and 762 Extra Class licensees in this state. Over one-tenth of the Indiana hams are concentrated in the Marion County area.

The ARRL now has a Program Exchange. Numerous program listings for the popular Commodore 64 and TRS 80 Color computers are available for the cost of a business-sized SASE with 39 cents postage. Here are some examples of what is available for the Commodore 64:

RTTY Send and Receive

Universal Contester

MINIMUF

Morse Code Trainer

Novice Exam Questions

3 and 4 Element Antenna Designer

Helical Antenna Designer

QSL Card Designer

Contact the editor for details, or write:

ARRL Dept. PX  
225 Main ST  
Newington, CT 06111

The first known Johnson Co. Packet Digipeater has been set up here at NB9M. If any Midstate Members know of another "packeteer" in the county, please let the editor know. Hard copies of Indiana ARRL bulletins, W1AW bulletins and propagation forecasts and many other items from RTTY/ Packet HF/VHF bulletin boards are available to club members. An SASE would be appreciated.

The Morgan County Reapeater Association is again sponsering the Indiana Hamfest, March 9 1986 in the Pavilion Building at the Indiana State Fair grounds. This is one of the major hamfests in the state, and is only a few years old; evolving from the Martinsville Hamfest which outgrew itself the first year!

Our own Dave Wendt, KA9OOH is sponsering novice classes beginning Monday, March 3rd at our University Heights Hospital facility at 1500 East South County Line Road. His number is 784-1044. Dave has experienced a good Kickoff for the classes due to the cooperation of radio stations and newspapers in the central Indiana area.

The third annual Columbus Amateur Radio Club will be Sunday, April 5, 1986 from 9:00 am to 5:00 pm at the 4H Fairgrounds south of Columbus, IN on S.R.11 (formerly 31A). If using I65, Exit#68, take S.R.11, then south about two miles. Talk-in is the 146.79 repeater, and admission is \$2.00 (under age 16 free.) Tables are available for two and three dollars- contact Chuck, WD9DWI for details. His phone number is 812-579-6576, and his address is 2950 So. Lake Dr., Columbus, IN 47203.

The annual severe weather meeting at NOA weather service in Indianapolis will be March 15, 1986 at 1pm. The Indiana severe weather simulation test will be March 20. WB9ZQE, Mike Head reports that amateur operators will play a more active roll in this

years test. Contact Dave Wendt for meeting details at 784-1044

A petition sent to the ARRL by Bruce Woodward, W9UMH was finally accepted by Perry Williams, W1UED, ARRL Board of Directors Secretary after a political scuffle. Bruce is now a candidate for ARRL Central Division Director. Marty, KA9PCT has sent his petition in to the ARRL also. His goal is Indiana Section Manager (Bruce's present position.)

The Civil Defense office is considering putting a 24 HR/DAY RBBS on 3.996.5 MHZ from the State Office Building in Indianapolis. This would be available to any general class or above licensee, and not limited to CD personnel. Dave, WA9ZCE the state RACES officer is wanting feedback. Would you use it? Would you like to express your support of this state-wide RTTY RBBS? Write:

Ron Hudson, KA9QAZ  
Indiana Dept. of Civil Defense  
90B State Office Building  
100 North Senate Avenue  
Indianapolis, IN 46204

or,

Leave message on RCA RBBS to N9CJT.

## PAN AM HAMS

The following amateurs are now involved with the planning of representation of amateur radio in the 1987 Pan Am activities:

### General and Operations

-John Patton, WB9WPV

### Traffic and Message Handling

-Mike Galloway, WD9AVQ

### Contesting and DX

-Kurt Pauker, KT9M

**Legal**

-Bob Droker, W9MOY

**Hamfest**

-Dick McKenna, WA9FUD

**Central Division Convention**

-Mike Head, WB9ZQE

**EMERGENCY COMMUNICATIONS****ARES**

-Marv Baker, W9KGE

**RACES**

-Mike Sercer, WA9FDO

**American Red Cross**

-Harold Davis, KC9JV

**HAMHOCKS**

Reel to Reel Recorder, Reverse-a-Track, Vox, Extra Reel of Low Noise Tape, AC Adaptor and More. Make Me An Offer or Trade. Looking For Good General Coverage Receiver. Call Ross, N9DZR at 736-8656

ATEK 250Mhz Frequency Counter. Rack Mount, Only About 2 Inches High. Call Dan Troglin, 356-5956 \$75.00

Yaesu FT221 All Mode 2 Meter Transceiver. Near Flawless, Complete With Manual and AC/DC Cables. "Sub-Band Mod" Installed. Call Brad, NB9M at 882-5245 before 9pm \$225.00

Franklin Ace 1000 64K Apple Compatible Computer, U/L Case, 8 Expansion Slots, Numeric Keypad, More. Call Tom, N9AMR at 784-6633 \$300.00

Franklin Ace 1200 64K Apple Compatible Computer, U/L Case, 80 Columns, Green Screen, Built In Disk Drive, Software Package and Much More. Call Tom, N9AMR at 784-6633 \$650.00

Icom 02AT with EVERY ACCESSORY. Best Offer. Epson QX10 IBM Compatible Computer With Built In Software, Dual Disk Drives, Green Screen Monitor, Printer, Modem, MS-DOS and CPM and Much Much More. Only \$1500.00!! For these items call Bill Gregory, KG1FR at 875-7493 ASAP. He's moving out of the country 3-15-86.

Do you have some gear you would like to sell or trade? Looking for something in particular? Drop us a line or give us a call to get your ad in HAMHOCKS.

**ABOUT THE CLUB...**

Many of the readers are non-members in the central Indiana area. This is a sample publication for prospective Midstate Members, and is a part of the annual membership drive. For those of you who would enjoy being involved in an active, growing fellowship of central Indiana radio amateurs, Midstate ARC may be for you.

Since its inception over 2 years ago, Midstate has more than tripled its membership. Using the advantage of being an activity oriented organization rather than a "repeater group," hams of all interests have lent us their time and talents.

The Midstate Amateur Radio Club owns and operates the 146.835 repeater, a system

which is improving rapidly in features and coverage. It is located in Whiteland, Indiana and is approximately 120 feet up. Midstate is active in ARES and INCERT, and is an ARRL sponsored club. Community activities such as bike-a-thons, conventions, parades and halloween patrols occur nearly every month, and our involvement in emergency related activities such as weather alerts, enforcement relief, S.E.T.'s and auxillary hospital communications is in a period of steady growth.

Easily Midstates most popular event, in its second Field Day effort we ranked in the top 30 of its class. Even higher sights are leveled at the 1986 Field Day event, which will again be held at the clean, comfortable air-conditioned facilities at Camp Atterbury in Edinburgh, Indiana.

Finally, Midstate ARC offers you the Midstate News, which features bi-monthly interviews, projects and news, while focusing more on local events and how they affect our hobby. Even allowing "stuffy statistics" to major magazines, this publication has quadrupled its size in one year.

In every successful organization an application exists for any talent that becomes involved. The product that results inevitably benefits all of us, as amateurs. Would you like to join us? Just send \$12.00 and your QSL (if available) to:

Midstate ARC  
P.O. Box 21  
Whiteland, IN  
46184

## HAMFEST UPDATE

March 9 . . . . .	Indiana Hamfest
March 16 . . . . .	Salem, IL
March 23 . . . . .	Grayslake, IL
March 23 . . . . .	Madison, OH
April 5 . . . . .	Columbus, IN

April 12 . . . . .	Greencastle
April 11,12 . . . . .	Mich.State Conv., Saginaw
April 25,26 . . . . .	Dayton Hamvention
May 4, . . . . .	Kankakee, IL
May 4 . . . . .	Sandwich, IL
May 11 . . . . .	Medina, OH
May 18 . . . . .	Wabash
May 18 . . . . .	Tri-State, Evansville
June 1 . . . . .	Terre Haute
June 8 . . . . .	Muncie
June 15 . . . . .	Lake County
July 12,13 . . . . .	Indiana State Convention, Indianapolis Hamfest.
July 27 . . . . .	Belvidere, IL
August 3 . . . . .	Angola
August 10 . . . . .	Marion
August 17 . . . . .	Lafayette
August 23 . . . . .	Marshall County
August 31 . . . . .	Bloomington
October 12 . . . . .	Bedford
October 18,19 . . . . .	St. Charles, IL Central Division Convention
November 9 . . . . .	Fort Wayne

## PRODUCT REVIEW

KENWOOD TM2550 -KM9S

The Kenwood TM2550 is a full featured 2 meter synthesized rig. Output power is five watts on low and 45 watts on high. There are 24 memory channels that can be scanned, and any of these can be locked out. Priority and alert can be set to any of the 24 channels. The rig also has the new DCL (Digital Channel Link) that is compatible with the DCS system of the older radios. The DCL is an optional accessory.

Also included is a fifteen number

telephone auto dialer that is very easy to use. There is a lamp function that makes all of the buttons and other controls light for easy programming in dark conditions. Other accessories you can get are a tone encoder and a voice synthesizer. All of the options can be user installed.

My particular unit has an actual output of six watts on low and fifty-two watts on high. I am really pleased with the radio; the only thing I don't like is the auto dialer. You are limited to only one phone number to a memory channel. But I especially like the easy to see LCD display: it is very visible under any lighting condition.

I think the TM2550 is a fantastic rig, and worth a look at. The average price is \$389.00.

-Darrell, KM9S

## V.E. TESTING OPPORTUNITIES

### Columbus, IN

Contact Dave Distler at 882-8371

DATES ..... Mar 22, Jul 26, Nov 22

### Franklin, IN

Contact Dave Distler at 882-8371

DATES ..... Apr 19, Aug 23

### Indianapolis, IN

Contact Louise Clark, KA9H at 241-1272

DATES ... Feb 1, Apr 5, Jun 7, Aug 2, Oct 4, Dec 6

### Indianapolis, IN (INDY HAMFEST)

Contact Willard Heath, KM9A

606 S Popular Ave

Fortville, IN 46040

## UPGRADING?

Information regarding additional amateur exams in the state are available from the Midstate News for an SASE.

## RIG MODS...

For amateurs involved in a MARS program or other radio service, the new programmable handhelds and general coverage HF rigs are appealing due to the adaptability to suit their particular needs. Here are a few of the easier modifications that will provide continuous transmit coverage, or transmit coverage within that of receive for six popular pieces of gear.

**KENWOOD TR2600:** Locate the two diodes standing on end with tubing over the exposed leads. These leads had been cut for testing purposes at the factory, then resoldered before assembly. Cut them again and separate them. Be sure to reset the processor before transmitting.

**KENWOOD TS940:** Remove D130 (located next to IC109.)

**ICOM IC745:** Clip the light brown wire at pin 1 of jack 7 on RF board.

**ICOM IC751:** Cut the black wire at pin 1 of jack 2 of RF board.

**ICOM IC735:** Remove D33 and D34.

**Yaesu 757:** Locate the small white switch under a wire bundle inside the top front near the frequency selector assembly. Slide it to the other position.

-TNX to WB6NOA for this info.

## DON'T FORGET!

"Fill the Cavities" drive needs you for financial support. Every dollar can make a difference!

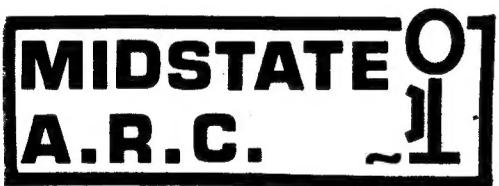
## AMATEUR ALLOCATION CHART

\*\*\*\*\*

FREQUENCY ALLOCATIONS FOR POPULAR AMATEUR BANDS  
All in Megacycles.  
'X' indicates no privileges

CLASS ->	NOVICE	TECHNICIAN	GENERAL	ADVANCED	EXTRA	
BANDS	CM	PHONE	CM	PHONE	CM	PHONE
160 METERS	X	X	X	X	1.8 to 2.0	1.8 to 2.0
80 METERS	3.700 to 3.750	X	3.700 to 3.750	X	3.525 to 4.000	3.525 to 3.750
40 METERS	7.100 to 7.150	X	7.025 to 7.150	X	7.225 to 7.300	7.025 to 7.150
30 METERS	X	X	X	X	10.100 to 10.150	10.100 to 10.150
20 METERS	X	X	X	X	14.025 to 14.150	14.025 to 14.150
15 METERS	21.1 to 21.2	X	21.025 to 21.2	X	21.30 to 21.45	21.025 to 21.45
12 METERS	X	X	X	X	24.890 to 24.930	24.890 to 24.930
10 METERS	28.1 to 28.2	X	28.00 to 28.30	X	28.30 to 28.70	28.0 to 28.70

-Created by N9AMR



P.O. BOX 21 WHITELAND, IN 46184

# Hoosier Hams in Action